FIG.1

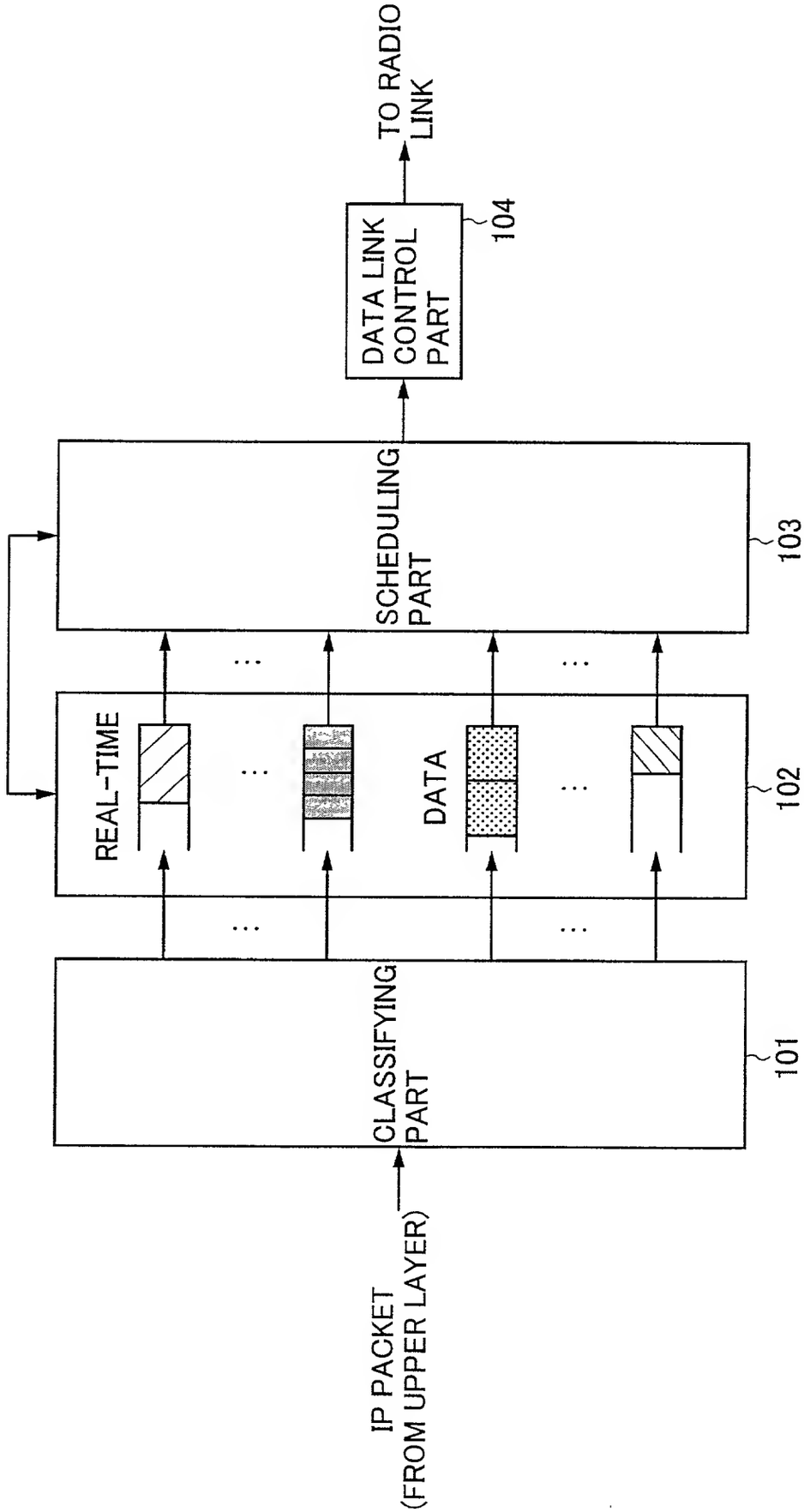
IP PACKET
(FROM UPPER LAYER)
CLASSIFYING PART
101
REAL-TIME
DATA
102
SCHEDULING PART
103
DATA LINK CONTROL PART
104
TO RADIO LINK

FIG.2

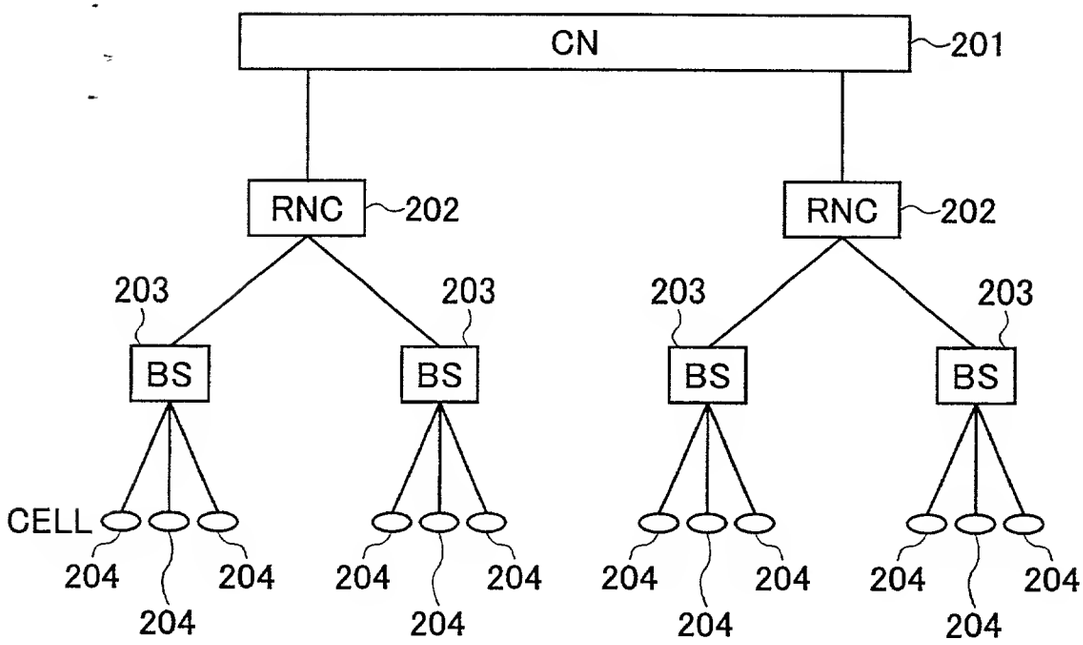
CN
201
RNC
202
RNC
202
203
203
203
203
BS
BS
BS
BS
CELL
204
204
204
204
204
204
204
204
204
204
204
204

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FIG.3

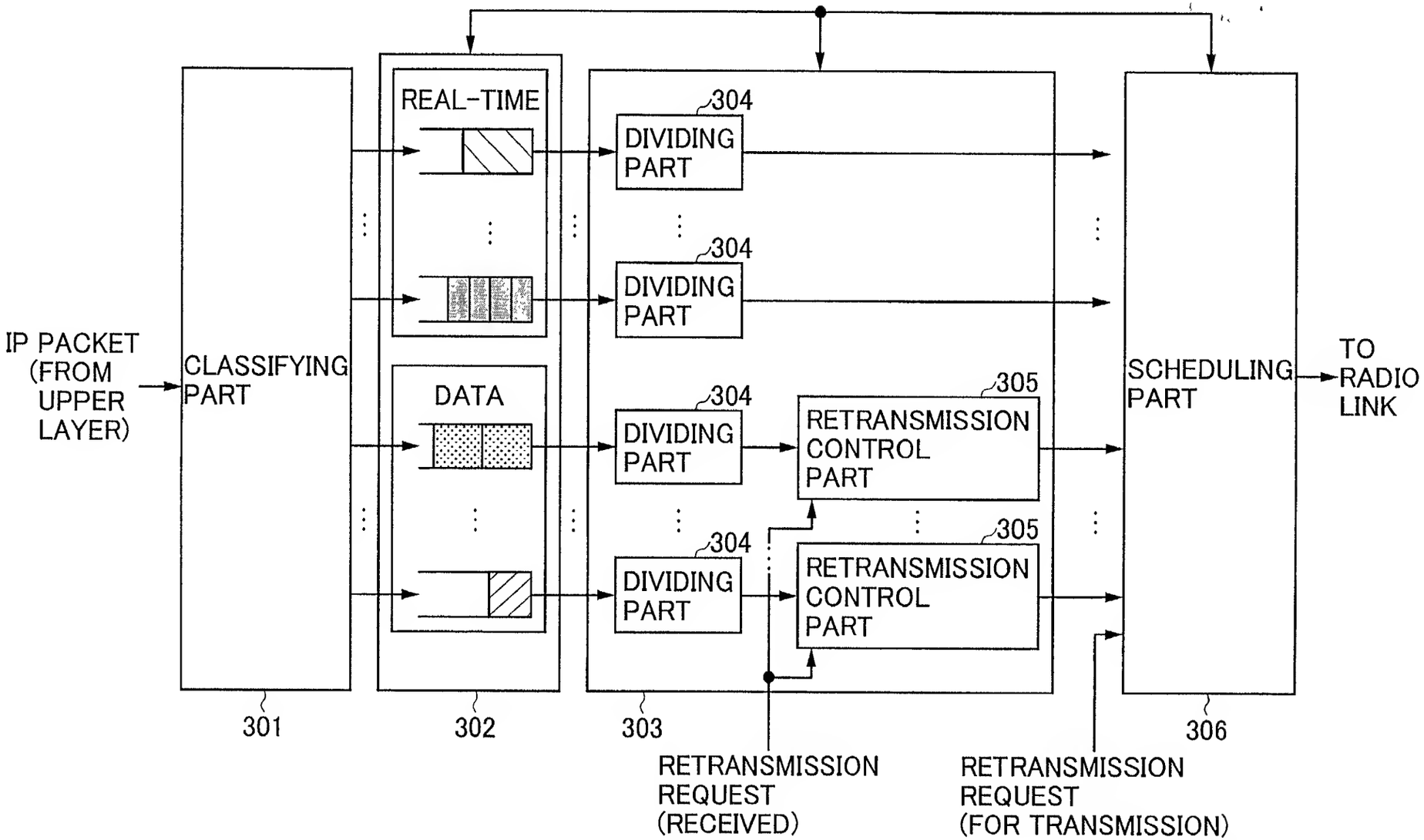


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FIG.4

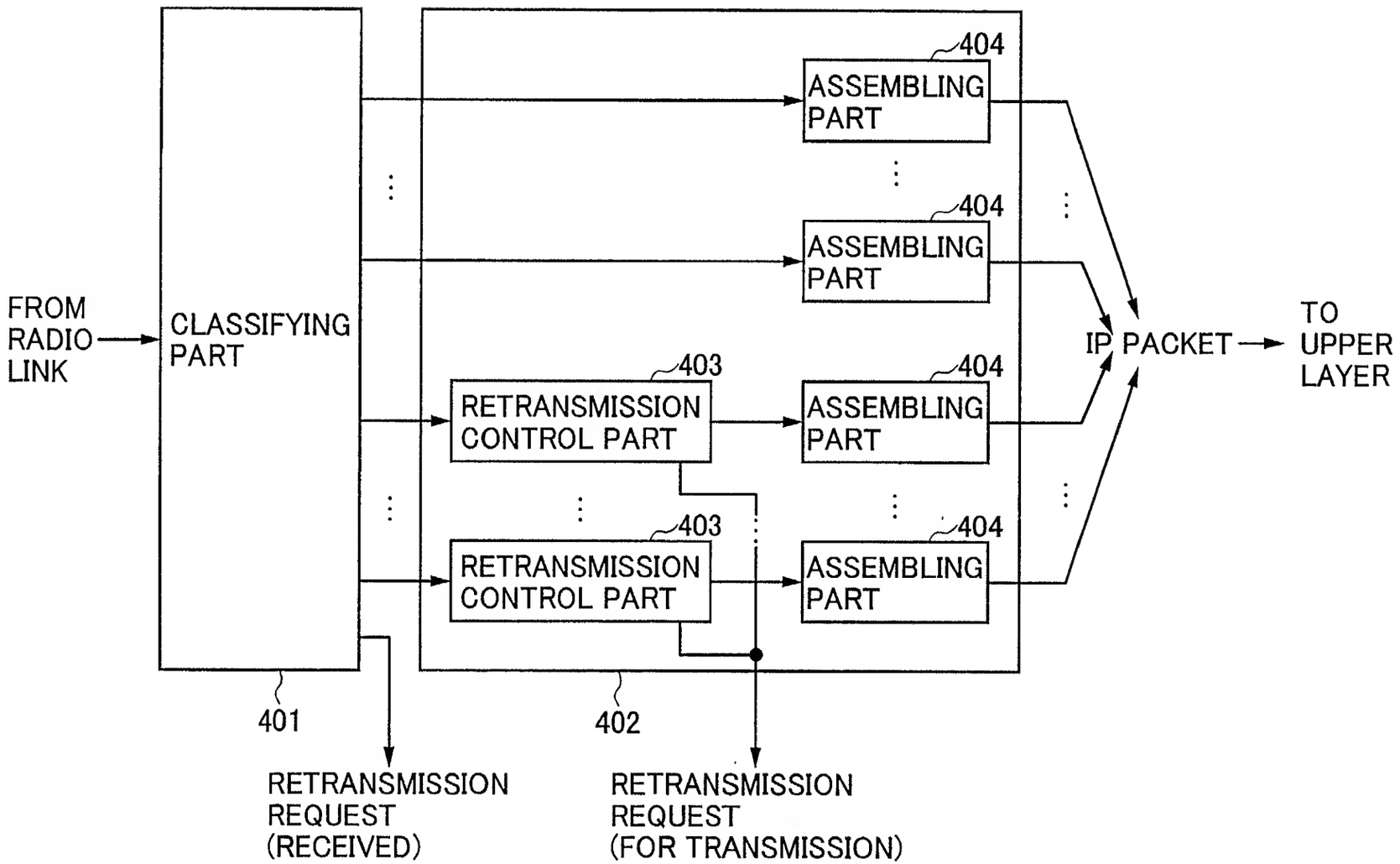


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FIG.5

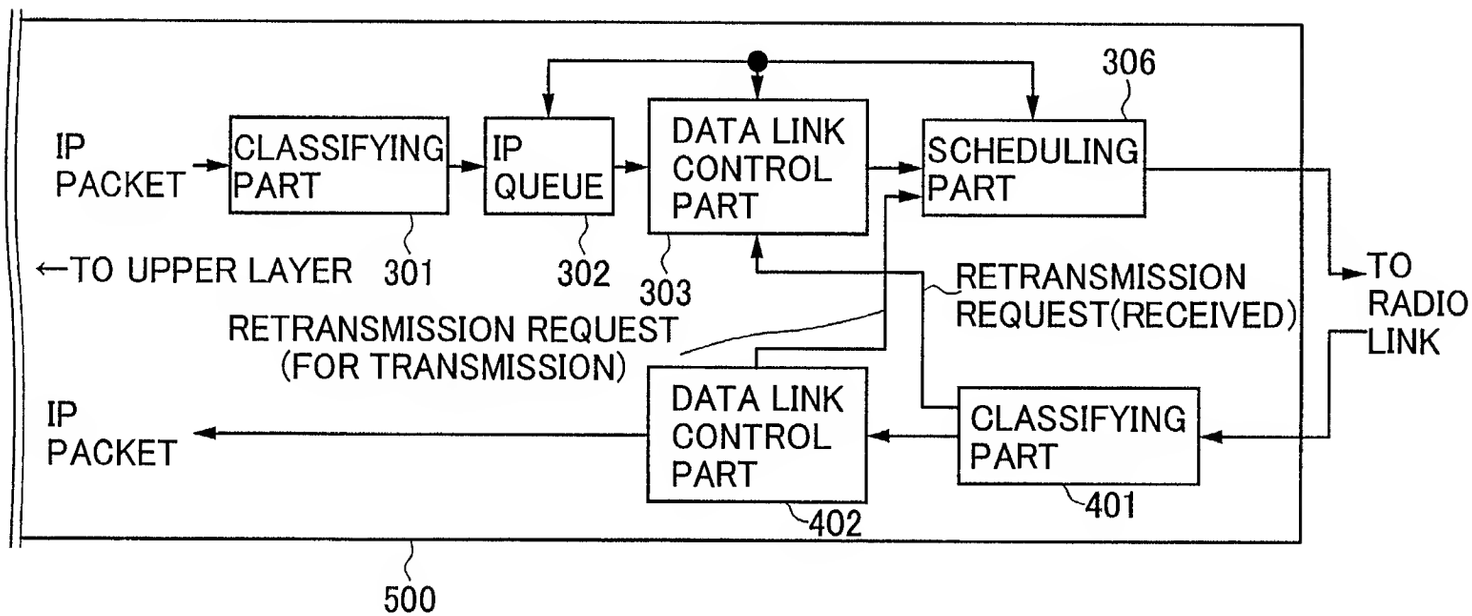


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FIG.6

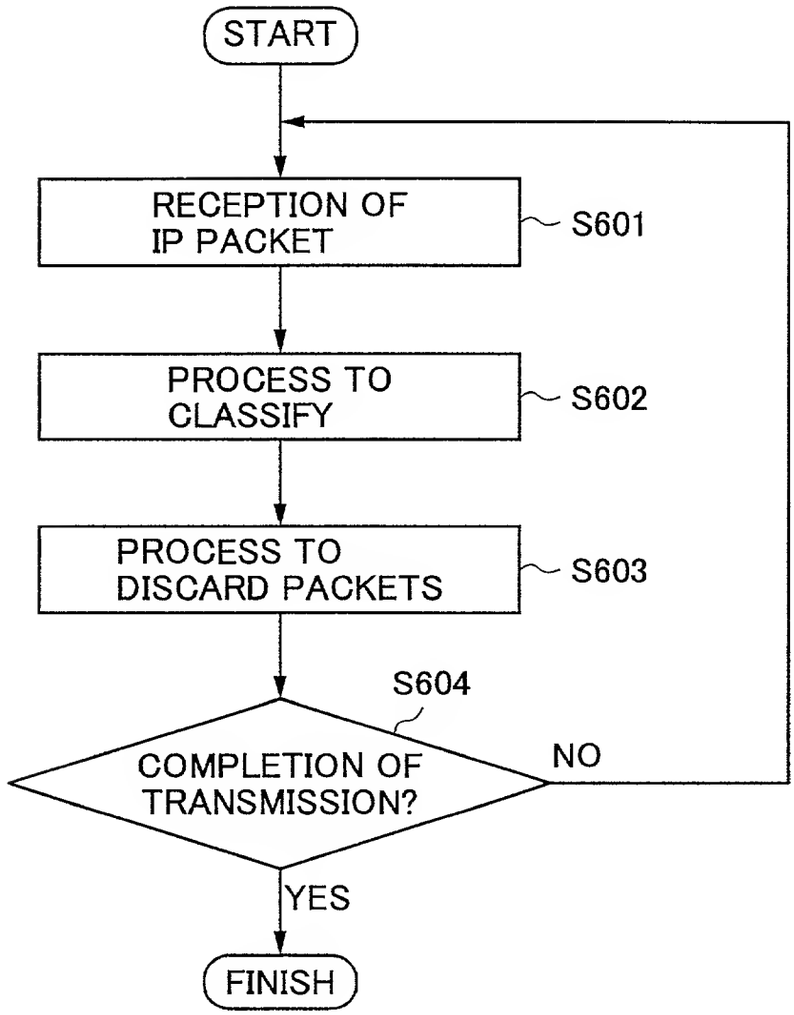
START
RECEPTION OF IP PACKET
S601
PROCESS TO CLASSIFY
S602
PROCESS TO DISCARD PACKETS
S603
S604
COMPLETION OF TRANSMISSION?
NO
YES
FINISH

FIG.7

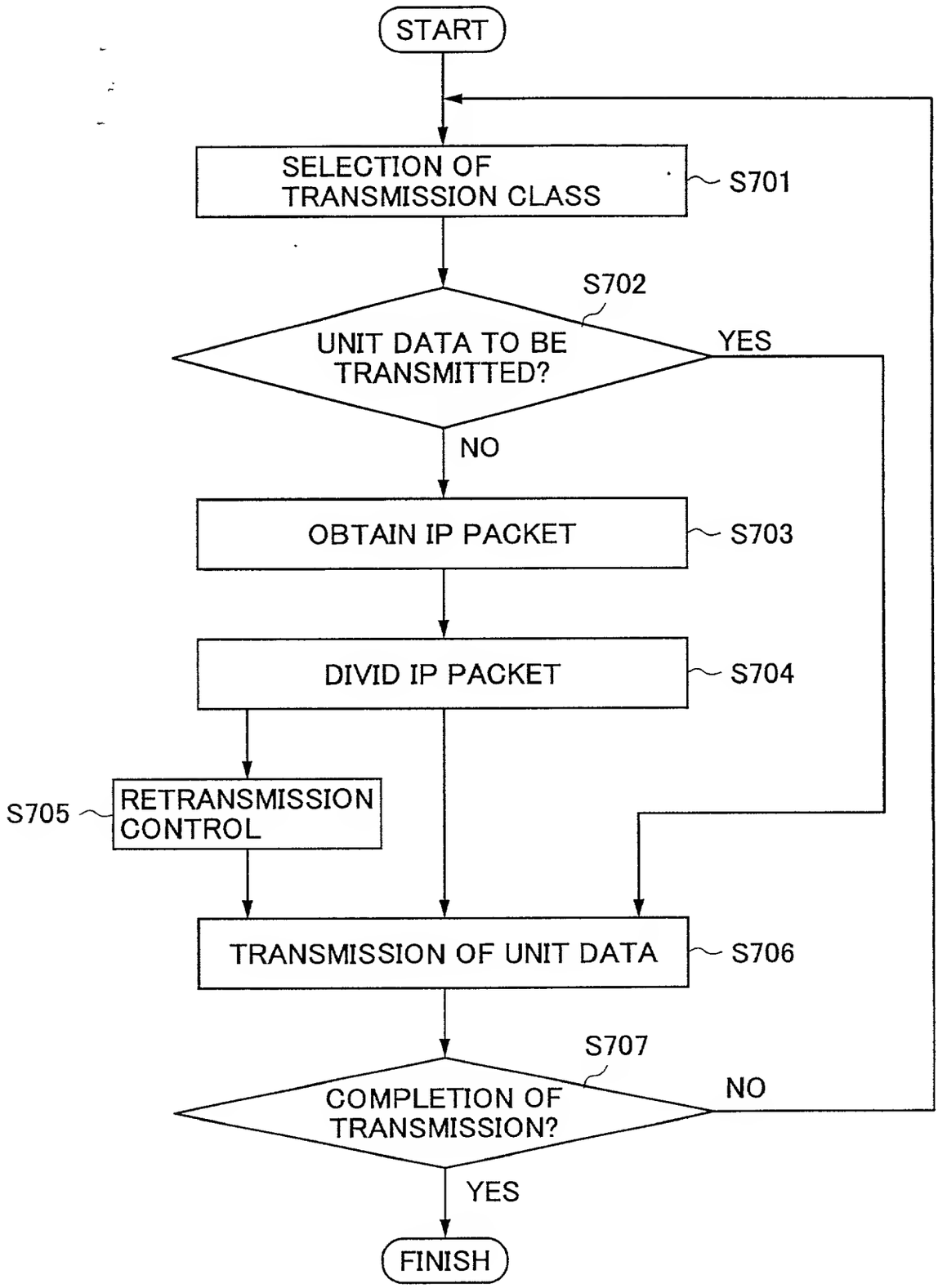
START
SELECTION OF TRANSMISSION CLASS
S701
S702
UNIT DATA TO BE TRANSMITTED?
YES
NO
OBTAIN IP PACKET
S703
DIVID IP PACKET
S704
S705
RETRANSMISSION CONTROL
TRANSMISSION OF UNIT DATA
S706
S707
COMPLETION OF TRANSMISSION?
NO
YES
FINISH

FIG.8

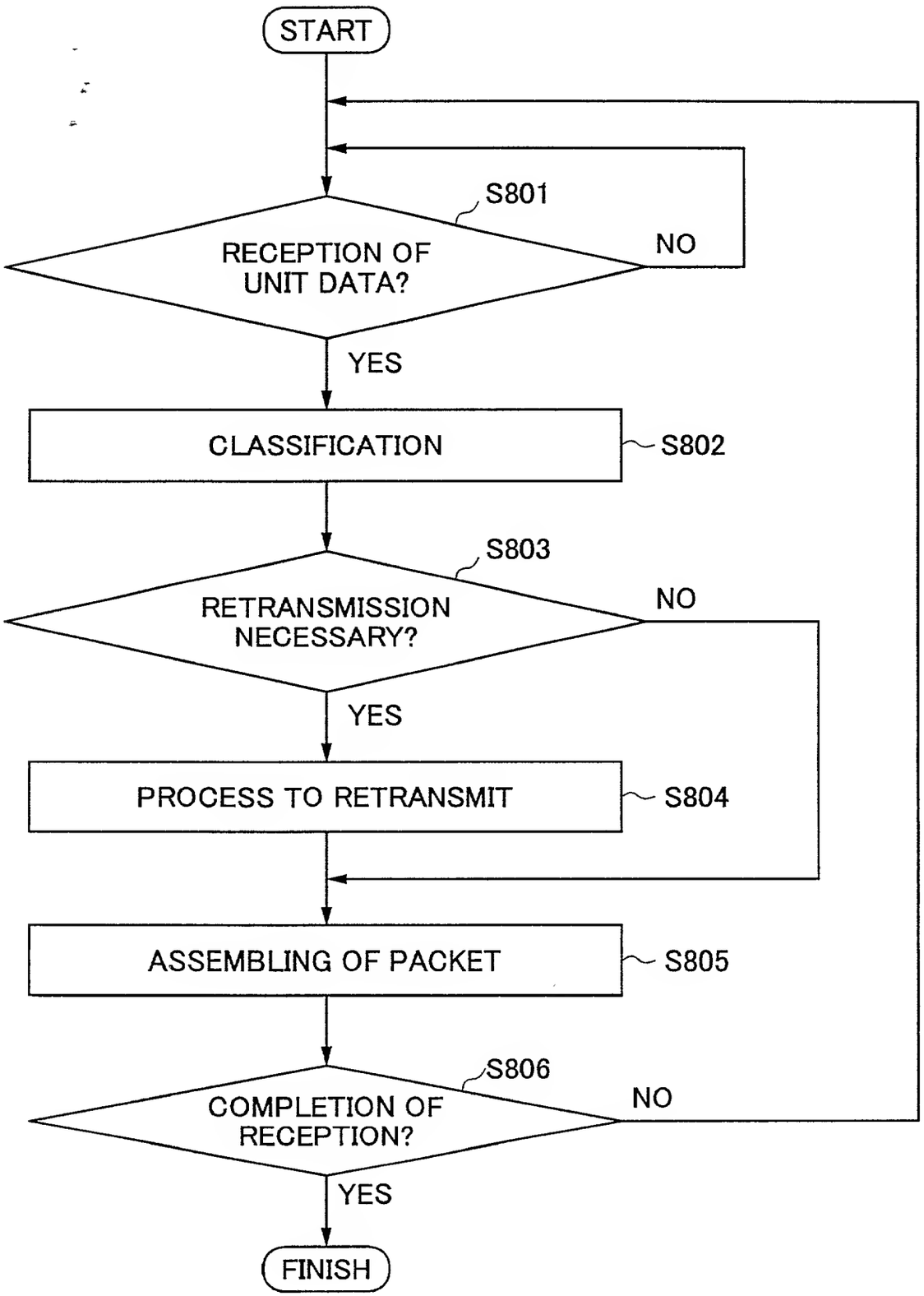
START
S801
RECEPTION OF UNIT DATA?
NO
YES
CLASSIFICATION
S802
S803
RETRANSMISSION NECESSARY?
NO
YES
PROCESS TO RETRANSMIT
S804
ASSEMBLING OF PACKET
S805
S806
COMPLETION OF RECEPTION?
NO
YES
FINISH

FIG.9

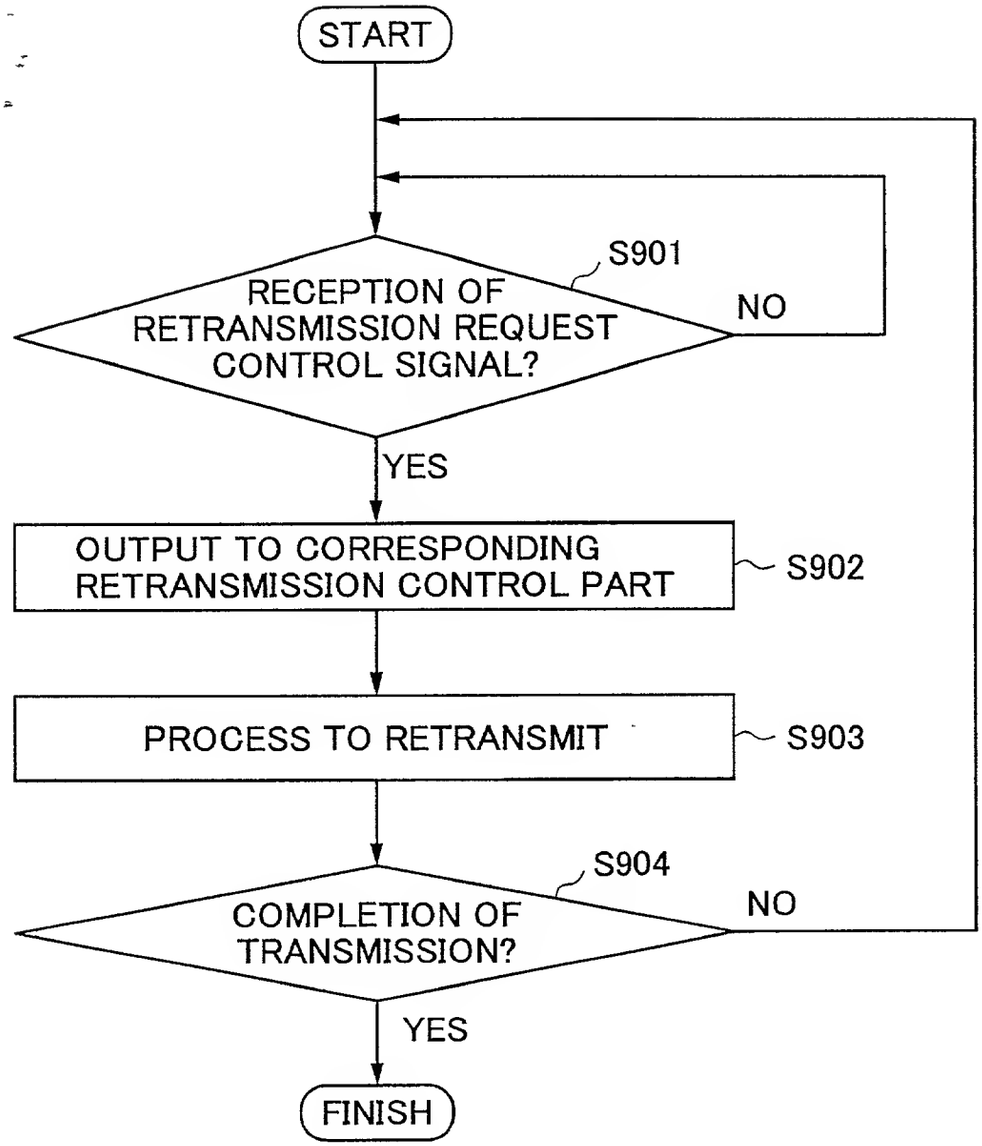
START
S901
RECEPTION OF RETRANSMISSION REQUEST CONTROL SIGNAL?
NO
YES
OUTPUT TO CORRESPONDING RETRANSMISSION CONTROL PART
S902
PROCESS TO RETRANSMIT
S903
S904
COMPLETION OF TRANSMISSION?
NO
YES
FINISH

FIG.10

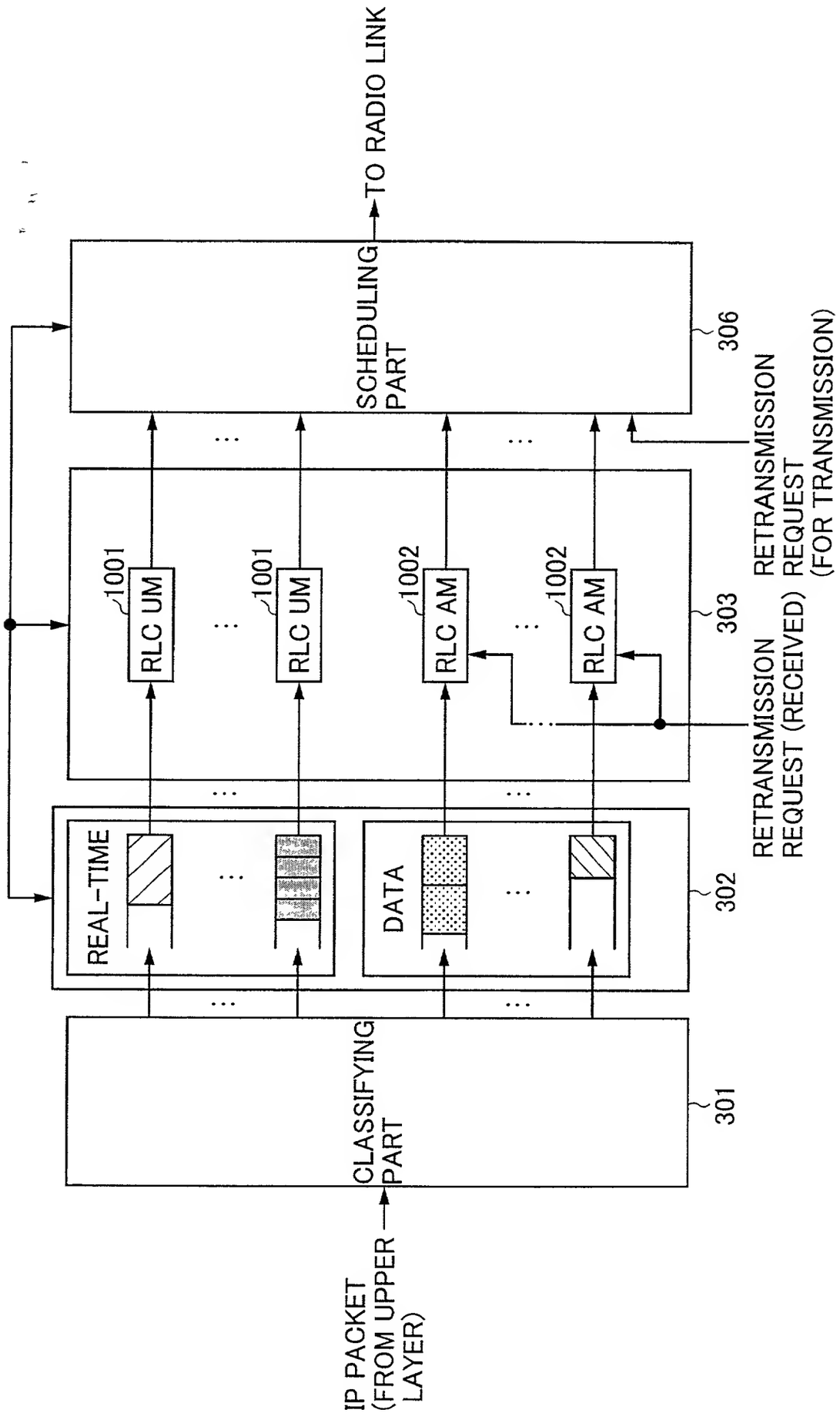
IP PACKET (FROM UPPER LAYER)
CLASSIFYING PART
301
REAL-TIME
DATA
302
1001
RLC UM
1001
RLC UM
1002
RLC AM
1002
RLC AM
303
RETRANSMISSION REQUEST (RECEIVED)
RETRANSMISSION REQUEST (FOR TRANSMISSION)
SCHEDULING PART
306
TO RADIO LINK

FIG.11

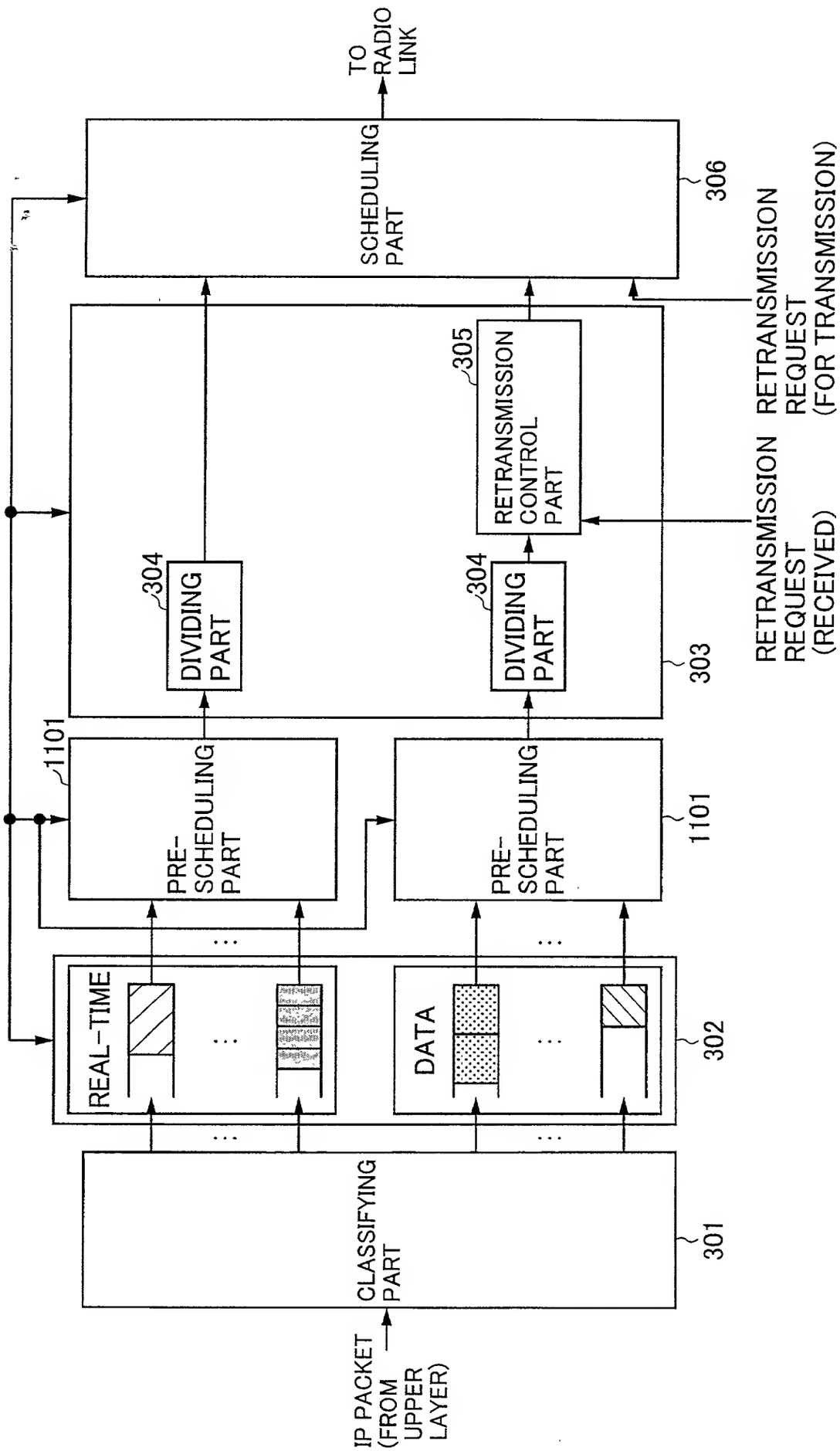
IP PACKET (FROM UPPER LAYER)
CLASSIFYING PART
301
REAL-TIME
DATA
302
PRE-SCHEDULING PART
1101
DIVIDING PART
304
303
RETRANSMISSION CONTROL PART
305
SCHEDULING PART
306
TO RADIO LINK
RETRANSMISSION REQUEST (RECEIVED)
RETRANSMISSION REQUEST (FOR TRANSMISSION)

FIG.12

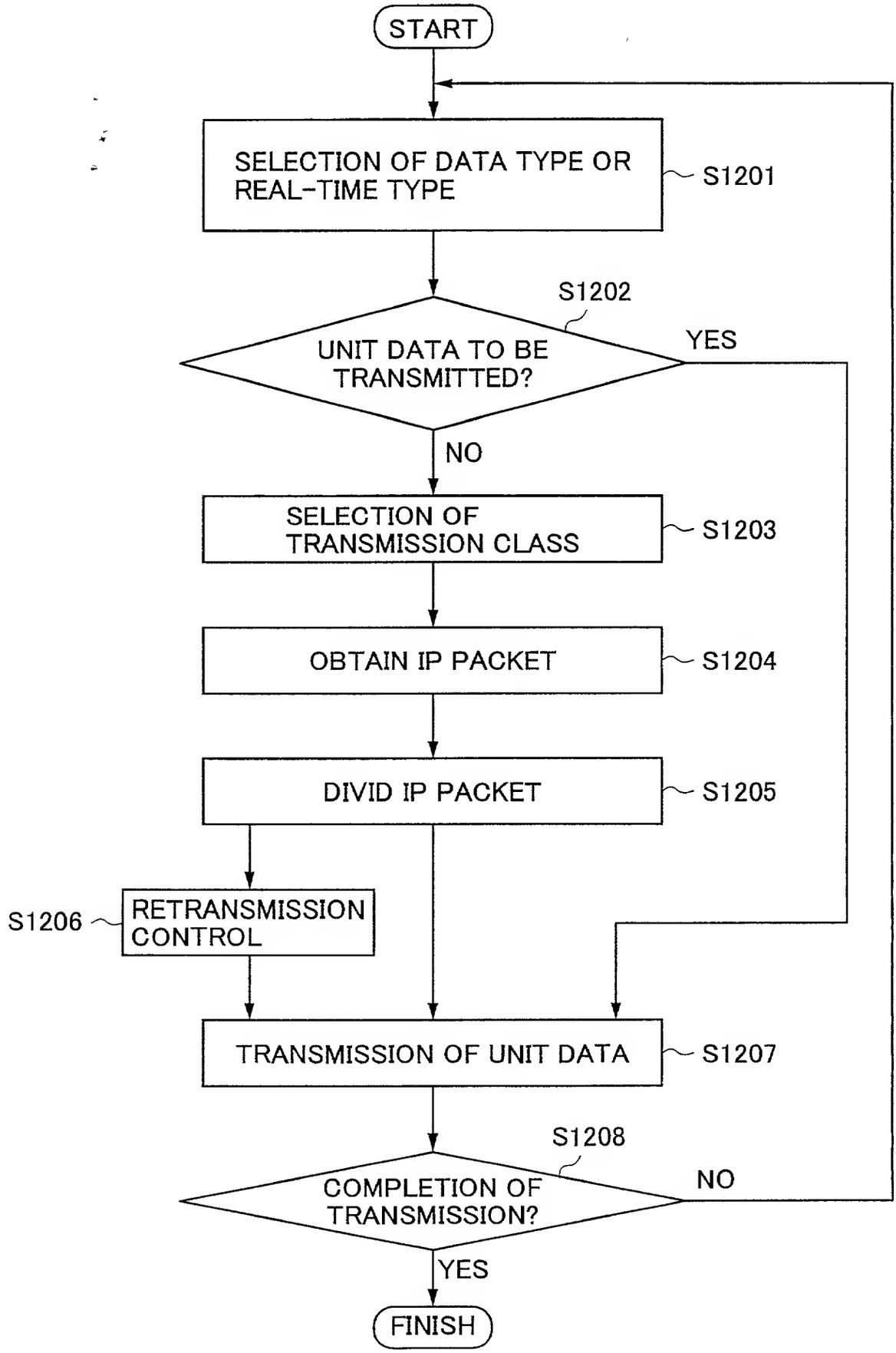
START
SELECTION OF DATA TYPE OR REAL-TIME TYPE
S1201
S1202
UNIT DATA TO BE TRANSMITTED?
YES
NO
SELECTION OF TRANSMISSION CLASS
S1203
OBTAIN IP PACKET
S1204
DIVID IP PACKET
S1205
S1206
RETRANSMISSION CONTROL
TRANSMISSION OF UNIT DATA
S1207
S1208
COMPLETION OF TRANSMISSION?
NO
YES
FINISH

FIG.13

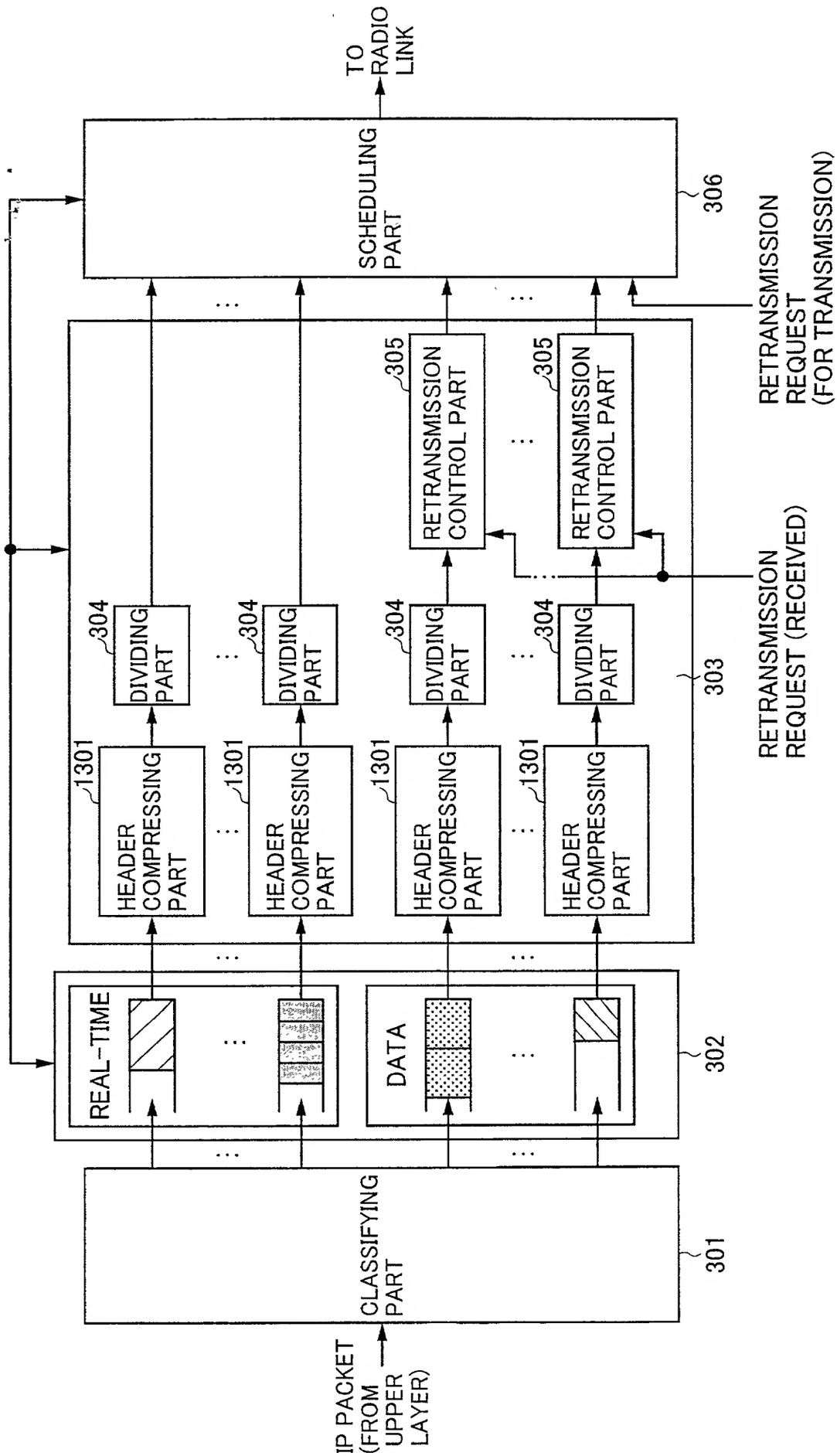
IP PACKET (FROM UPPER LAYER)
CLASSIFYING PART
301
REAL-TIME
DATA
302
HEADER COMPRESSING PART
1301
DIVIDING PART
304
303
RETRANSMISSION CONTROL PART
305
RETRANSMISSION REQUEST (RECEIVED)
RETRANSMISSION REQUEST (FOR TRANSMISSION)
SCHEDULING PART
306
TO RADIO LINK

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FIG.14

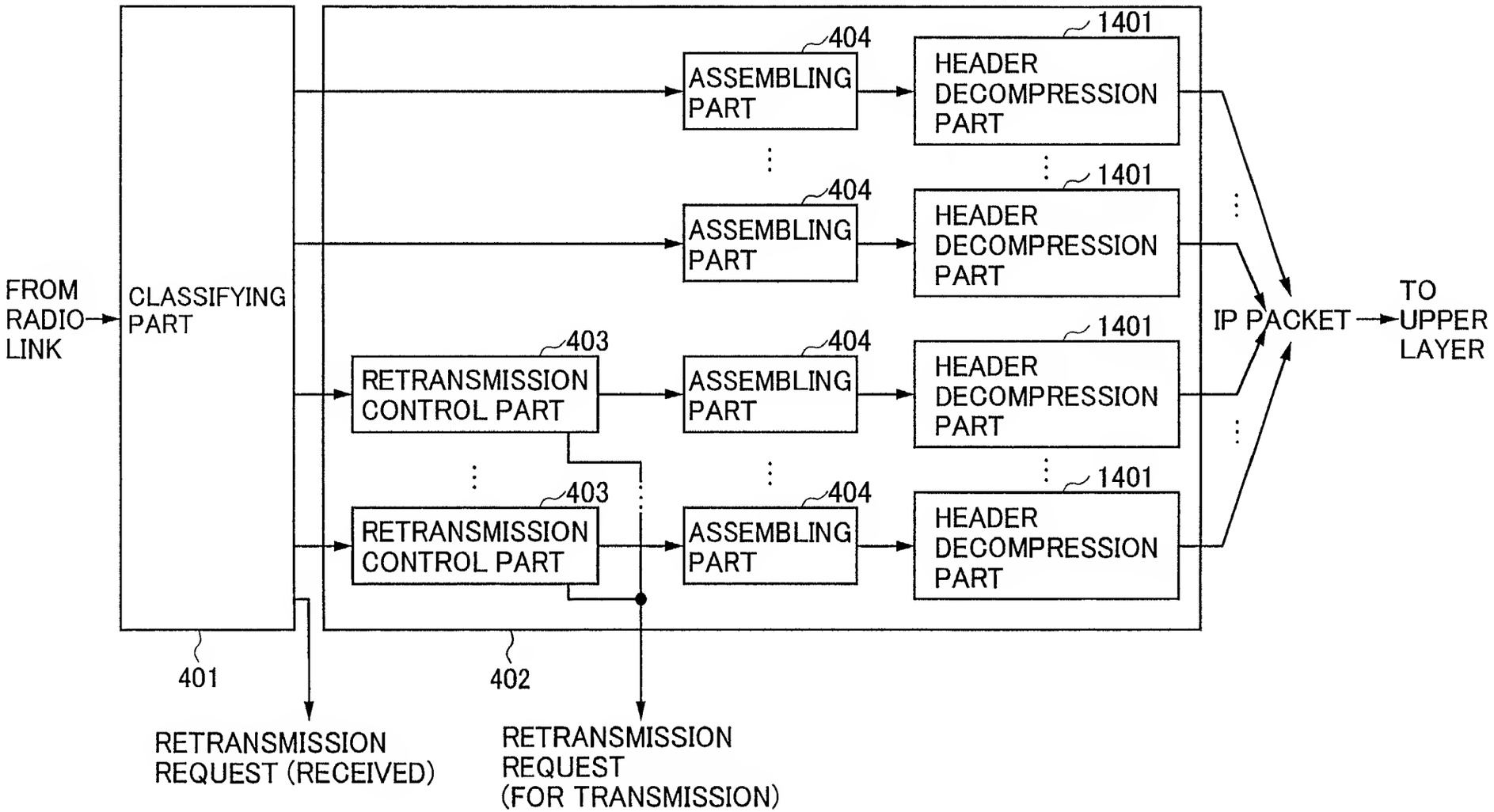


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FIG.15

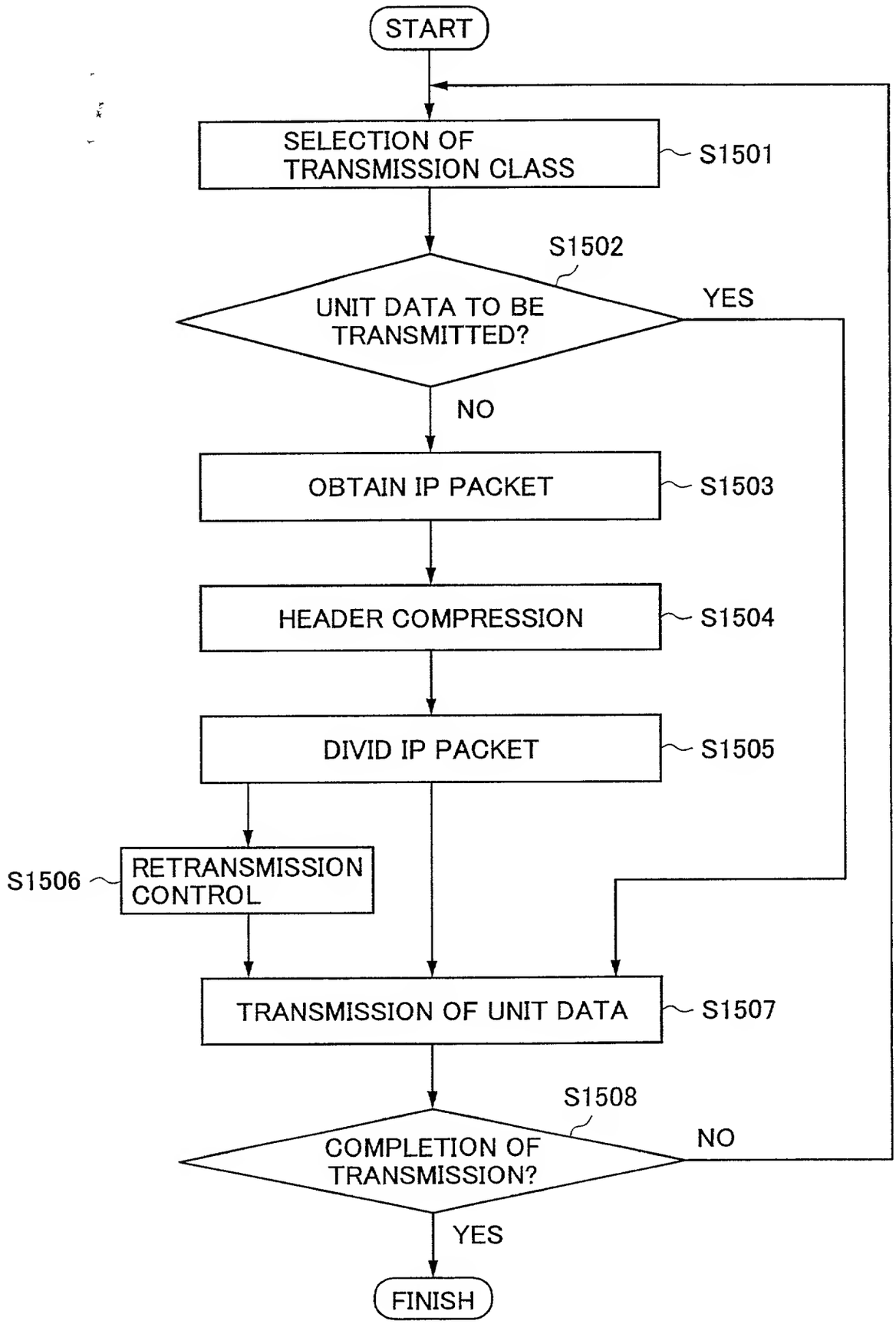

START
SELECTION OF TRANSMISSION CLASS
S1501
S1502
UNIT DATA TO BE TRANSMITTED?
YES
NO
OBTAIN IP PACKET
S1503
HEADER COMPRESSION
S1504
DIVID IP PACKET
S1505
S1506
RETRANSMISSION CONTROL
TRANSMISSION OF UNIT DATA
S1507
S1508
COMPLETION OF TRANSMISSION?
NO
YES
FINISH

FIG.16

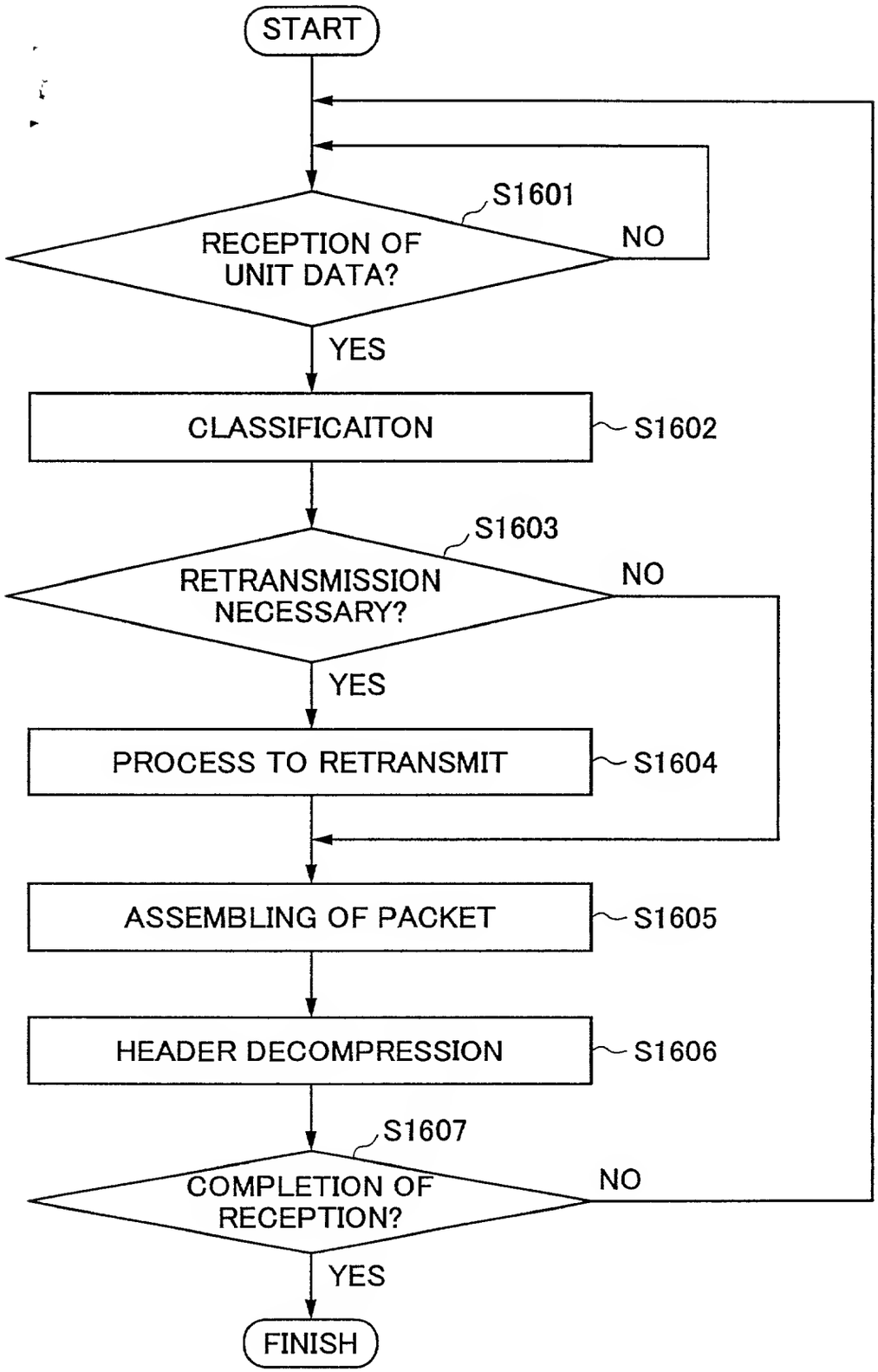
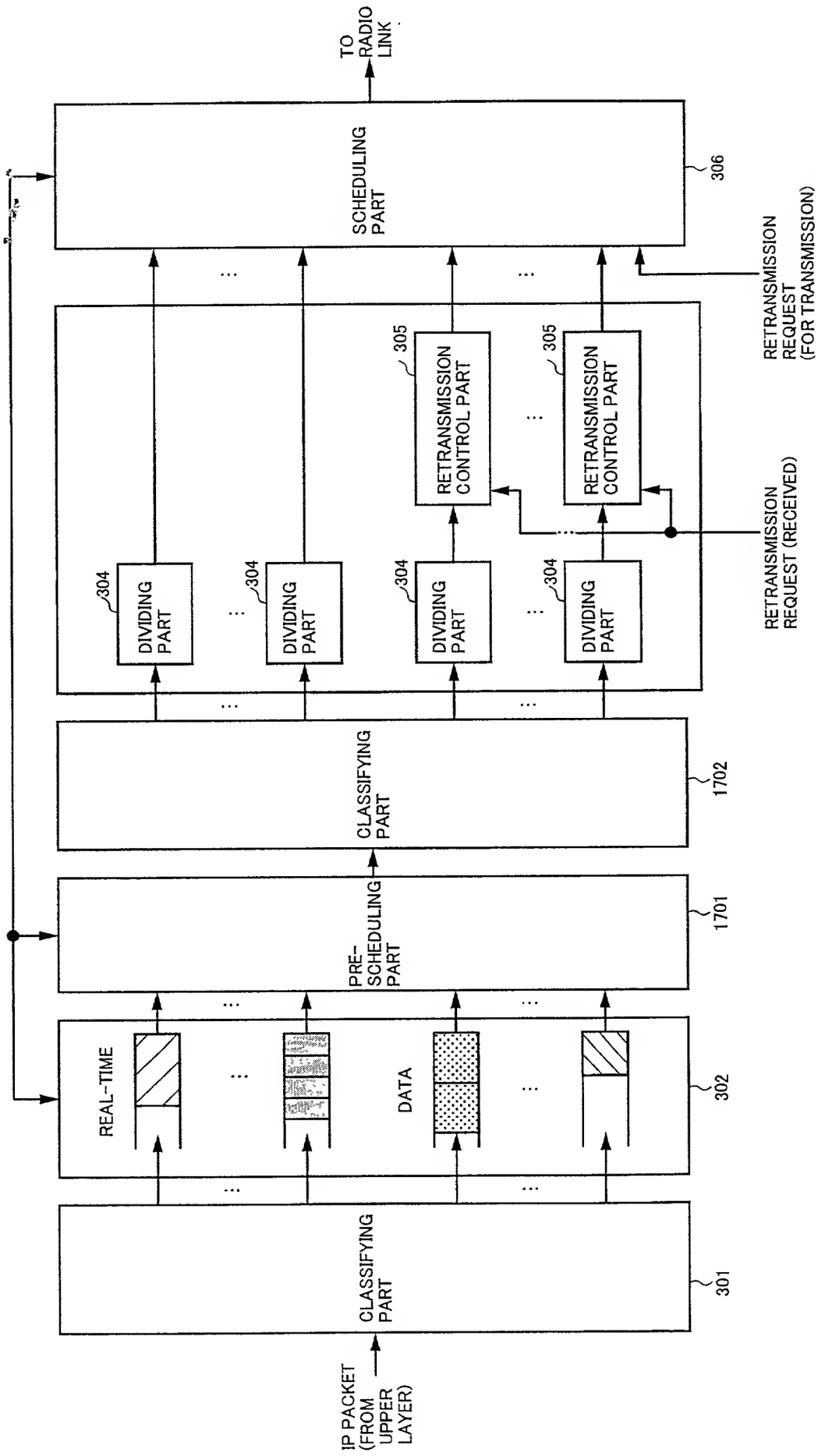

START
S1601
RECEPTION OF UNIT DATA?
NO
YES
CLASSIFICAITON
S1602
S1603
RETRANSMISSION NECESSARY?
NO
YES
PROCESS TO RETRANSMIT
S1604
ASSEMBLING OF PACKET
S1605
HEADER DECOMPRESSION
S1606
S1607
COMPLETION OF RECEPTION?
NO
YES
FINISH

FIG.17


IP PACKET (FROM UPPER LAYER)
CLASSIFYING PART
301
REAL-TIME
DATA
302
PRE-SCHEDULING PART
1701
CLASSIFYING PART
1702
DIVIDING PART
304
RETRANSMISSION CONTROL PART
305
SCHEDULING PART
306
TO RADIO LINK
RETRANSMISSION REQUEST (RECEIVED)
RETRANSMISSION REQUEST (FOR TRANSMISSION)